

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:

Jeffrey A. Tilton et al.

Attorney Docket No.: 25363A

Serial No.: 10/789,143

Group Art Unit: 1794

Filed: February 27, 2004

Examiner: Piziali, Andrew T.

For: LAYERED POLYMER FIBER INSULATION AND  
METHOD OF MAKING THEREOF

**SUBSTITUTE APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Appeal is taken from the rejection of pending claims 1–27 made in the Office Action of April 21, 2008. No claim has been allowed. A timely Notice of Appeal was filed on August 4, 2008. Please debit any fee due from Deposit Account 50-0568.

**TABLE OF CONTENTS**

I.	Real Party in Interest .....	3
II.	Related Appeals and Interferences .....	3
III.	Status of the Claims .....	3
IV.	Status of Amendments .....	3
V.	Summary of Claimed Subject Matter .....	3
VI.	Grounds of Rejection to be Reviewed on Appeal .....	4
VII.	Argument .....	5
VIII.	Claims Appendix .....	21
IX.	Evidence Appendix .....	25
X.	Related Proceedings Appendix .....	25

### **I. REAL PARTY IN INTEREST**

The inventors assigned 100% of their interest in the present invention as embodied in U.S. Patent Application Serial No. 09/966,309 to Owens-Corning Fiberglas Technology, Inc., an Illinois corporation having a place of business at 7734 West 59<sup>th</sup> Street, Summit, Illinois 60501. Owens-Corning Fiberglas Technology, Inc., assigned its interest to the following real party in interest: Owens Corning Intellectual Capital, LLC (“Owens Corning” or “Appellant”).

### **II. RELATED APPEALS AND INTERFERENCES**

Appellant knows of no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board’s decision in this appeal.

### **III. STATUS OF THE CLAIMS**

Claims 1-27 remain pending in the application, stand rejected, and are the subject of this appeal.

### **IV. STATUS OF AMENDMENTS**

The form of the claims for purposes of this appeal is as presented in the response of February 5, 2008. For the convenience of the Board, a copy of the pending claims appears in the attached Claims Appendix.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The inventions of the independent claims are concisely summarized in the following manner. Claim 1 of the present application reads on a liner/insulator comprising: (a) a first layer of wet processed mat 2, 4, or 6; and (b) a second layer of wet processed mat 2, 4, or 6 directly bonded to said first layer (see Figure 1 and p. 7, line 27 to p. 8, line 3). The first and second layers 2, 4 (or 6) comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers of different fiber formulations (p. 7, ll. 18-24 and p. 8, line 18).

Claim 13 recites a method of producing a wet processed liner/insulator comprising the steps of: a) providing a first layer of wet processed mat 2, 4, 6; and b) providing a second layer of wet processed mat 2, 4, 6 having a different fiber formulation than said first layer (p. 7, line 27 to p. 8, line 3; p. 7, ll. 18-24 and p. 8, line 18). The first and second layers comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers (p. 7, ll. 18-24). The method of claim 13 further includes the step of applying sufficient heat and pressure to the first and second layers of mat to bond said first layer and said second layer directly together and form

said liner/insulator (p. 8, lines 1-3).

Independent claim 25 relates to a liner/insulator comprising: a) a first layer of wet processed mat 2, 4, 6; b) a second, discrete layer of wet processed mat 2, 4, 6 directly bonded to said first layer; and c) a third, discrete layer of wet processed mat 2, 4, 6 directly bonded to said second layer. The first, second, and third layers comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers (p. 7, line 27 to p. 8, line 3; p. 7, ll. 18-24 and p. 8, line 18), which bicomponent fibers bond the fibers together within each individual layer of the mat p. 8, lines 1-3) .

Independent claim 26 involves a liner/insulator comprising: a) a first individual layer of wet processed mat 2, 4, 6 having a first face; and b) a second individual layer of wet processed mat 2, 4, 6 having a second face contacting said first face of said first layer (Figure 1 and p. 7, line 27 to p. 8, line 3). The first and second individual layers 2, 4, 6 comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers of different fiber formulations (p. 7, ll. 18-24 and p. 8, line 18).

Independent claim 27 recites a method of producing a wet processed liner/insulator comprising the steps of: a) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a first layer of wet processed mat having a first face (Figure 1 and p. 5, lines 13-14, p. 7, ll. 18-24 and p. 8, line 18); b) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a second layer of wet processed mat having a different fiber formulation than said first layer (*Id.*), said second layer having a second face; and c) applying sufficient heat and pressure to said first and second layers of mat to bond said first layer and said second layer directly together and form said liner/insulator (p. 8, lines 1-3).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The following grounds of rejection are presented for review on appeal:

(1) The ground of rejection of claim 25 under Section 112, first paragraph, as stated on page 2, section 2 of the final Office Action dated April 21, 2008;

(2) The ground of rejection of claims 10, 20, and 25 under 35 U.S.C., second paragraph, as stated on page 2, section 5 of the final Office Action dated April 21, 2008;

(3) The ground of rejection of claim 25 based on anticipation under 35 U.S.C. 102(b) by Oleszczuk or Lickfield, as stated on page 3, section 7 of the final Office Action dated April 21, 2008;

(4) The ground of rejection of Claims 1-5, 11, 12, 25 and 26 as being anticipated under 35 U.S.C. Section 102(b) as anticipated by Welch, as stated on page 4, section 8 of the final Office Action dated April 21, 2008;

(5) The ground of rejection of claims 1-5, 9-15, 19-22, and 24-27 as obvious under 35 U.S.C. Section 103(a) over Oleszczuk or Lickfield and Welch, as stated on page 5, section 10 of the final Office Action dated April 21, 2008;

(6) The ground of rejection of claims 1-5, 11-15, 21-22, and 25-27 as obvious under 35 U.S.C. Section 103(a) over Welch in view of Holm, Cederblad, or D'Acchioli, as stated on page 11, section 15 of the final Office Action dated April 21, 2008;

## **VII. ARGUMENT**

### **A. CLAIMS 10, 20, AND 25 MEET THE REQUIREMENTS OF 35 USC SECTION 112, ¶2**

The final Office Action rejects claims 10, 20, and 25 as allegedly failing to comply with the requirements of Section 112, second paragraph.

#### **i. CLAIMS 10 AND 20 MEET THE REQUIREMENTS OF 35 USC SECTION 112, ¶2**

In support of the rejections of claims 10 and 20, it is contended that “[i]t is not clear what heat resistance is encompassed by a ‘high heat resistance.’” The Examiner further faults the Appellant for not providing examples of “high heat resistance” when requested to do so.

As stated in the Manual of Patent Examining Procedure, “[a]cceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification.” MPEP § 2173.05(b). Accordingly, it does not matter if the phrase, when read in a vacuum, might have a different meaning to different individuals based on different interpretations. Instead, it matters whether a skilled artisan would fail to understand what is claimed upon reviewing Applicant’s specification, which has not been established.

In maintaining the rejection, the Examiner contends that Appellant failed to provide a definition or any examples of what “high heat resistance” means. Respectfully, as evidenced by the MPEP section cited above, it is not necessary for the Appellant to provide a definition in order for a claim term to be definite, since the meaning that would be understood based on the specification is controlling. Moreover, the Examiner’s contention that the term “high heat resistance” is “subjective” does not *per se* mean that it is indefinite. That an interpretation of claim terminology involves the subjective understanding of a skilled artisan based on the

teachings of the accompanying specification does not render it indefinite. *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1119-20, 65 USPQ2d 1051 (Fed. Cir. 2002) (recognizing that guidance as to measurement of a term of degree can come from the knowledge of a person of ordinary skill in the art).

As Appellant previously observed, the position taken in the present rejection flies in the face of numerous issued patents claiming “high heat resistance,” such as U.S. Patent No. 7,165,677 (Claim 12 - “a film or paint having **high heat resistance** is provided”); U.S. Patent No. 7,161,125 (Claim 1 – “wherein said transfer mechanism is formed of a material that does not have **high heat-resistance** and fire-resistance”); and U.S. Patent No. 7,138,610 (Claim 12 - wherein the at least one heat insulating member is made of glass material or ceramic material having a **high heat resistance**). These are but a few examples of the hundreds of issued patents having the same limitation used by the Appellant to describe its invention. In light of the foregoing and the teachings in the Applicant’s specification as to how high heat resistance may be achieved, reversal of the rejections of claims 10 and 20 under Section 112 of the Patent Act is respectfully requested.

ii. **CLAIM 25 MEETS THE REQUIREMENTS OF 35 USC SECTION 112, ¶2**

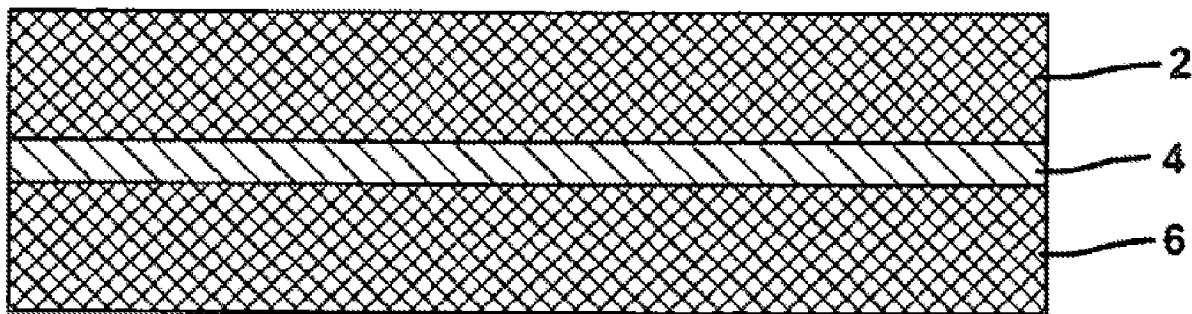
Claim 25 is alternatively rejected under Section 112, second paragraph, as being indefinite because “it is not clear how the layers can be ‘discrete’ (unconnected) while also being bonded together” (Office Action dated April 21, 2008, p. 16, last paragraph). As shown in Figure 1, the layers are clearly “composed of separate and distinct parts” and have an individual identity (that is, discrete) while being bonded together. There is simply no incongruity.

In contending otherwise, the Examiner cites to a definition of discrete from “answers.com” and conveniently selects “unconnected” from the several meanings provided there. Not surprisingly, terms used in claims have different meanings in different contexts, but nothing in the present record supports the Examiner’s assertion that a skilled artisan reviewing Applicant’s specification would understand the word “discrete” to mean “unconnected” in the present context. To the contrary, the ordinary meaning of this term to a scientist or engineer is evidenced by the above-referenced technical definition and the corresponding parameters from the Applicant’s specification. *See In re Cortright*, 165 F.3d 1353, 1358, 49 USPQ2d 1464 (Fed. Cir. 1999) (“Although the PTO must give claims their broadest reasonable interpretation, this interpretation must be consistent with the one that those skilled in the art would reach.”)

(emphasis added). Instead of according meaning based on the language used in the specification and claims to construe “discrete” consistent with the requirement that the layers are bonded together, the Examiner appears to be rely on a layman’s definition of the term “discrete,” which although perhaps convenient is clearly improper. *See Ex parte Kumagai*, [No West Cite] 9 USPQ2d 1642 (BPAI 1988) (holding that “[i]ndiscriminate reliance should not be placed on layman's definitions found in dictionaries” and that “**the lay definition of ‘discrete’ relied upon by the examiner does not even suggest its applicability to [this] technical area.**”) (emphasis added). Accordingly, reversal of the rejection of claim 25 under Section 112 in light of the proper interpretation of “discrete” in light of the claim language and teachings of the specification is respectfully requested.

**B. CLAIM 25 MEETS THE REQUIREMENTS OF 35 USC SECTION 112, ¶1**

Turning to claim 25, the Examiner first contends that it fails to comply with the written description requirement because “the specification does not teach or suggest the claimed second and third ‘discrete’ layers.” Appellant respectfully submits that this rejection is without merit, since the specification clearly describes “individual” layers 2, 4, 6 of wet processed mat, and illustrates the same in Figure 1:



This teaching is entirely consistent with the “ordinary” meaning of “discrete” in the context of the invention:

**discrete** [SCI TECH] 1. Composed of separate and distinct parts. 2. Having an individually distinct identity. { di'skrēt }

*McGraw-Hill Dictionary of Scientific and Technical Terms* (6<sup>th</sup> ed. 2003).<sup>1</sup> Hence, there is a clear written description<sup>2</sup> in the specification as filed of the invention of claim 25, which comprises layers “composed of separate and distinct parts” and “[h]aving an individually distinct identity” that are directly bonded together. Contrary to the Examiner’s apparent position, the presence or absence of literal support in the specification for the claim language is not the proper consideration.<sup>3</sup> Accordingly, reversal of the rejection of claim 25 under Section 112, first paragraph, is in order.

C. **CLAIM 25 IS NOT ANTICIPATED BY OLESZCZUK OR LICKFIELD**

Turning to the rejection of claim 25 as anticipated, Appellant challenged the Examiner’s purported factual finding that either Oleszczuk or Lickfield discloses the exact same invention claimed. In making these rejections, the Examiner **never** establishes that either cited reference discloses the three claimed layers, but rather arbitrarily and capriciously speculates that a single mass of fibers can be considered as a “multi-layered article” (despite having taken precisely the opposite position in a prior Action; see Office Action dated July 11, 2005, p. 3, para. 5, lines 4-5, wherein the Examiner admitted that “**neither Oleszczuk nor Lickfield specifically mentions a third layer of wet processed mat**”) (emphasis added).

“Anticipation requires that **all** of the elements and limitations of the claim are found within a single prior art reference.” *Carella v. Starlight Archery and Pro Line Co.*, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir. 1986) (emphasis added). Here, the Examiner does not even allege that the claimed third layer is “found” in the Oleszczuk or Lickfield references. Rather, the Examiner simply contends, without citing any evidence, that “a single mass of wet

---

<sup>1</sup> CAFC decisions routinely rely on this dictionary as authoritative for the meaning of terms used in patent claims. *See, e.g., Mangosoft, Inc. v. Oracle Corp.*, 525 F.3d 1327, 86 USPQ2d 1939 (Fed. Cir. 2008) (citing source, stating “there is nothing improper about referencing this definition in correctly construing the claim.”); *L.B. Plastics, Inc. v. Amerimax Home Prods.*, 499 F.3d 1303, 84 USPQ2d 1341 (Fed. Cir. 2007) (citing source for definition of “weld”); *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1351 80 USPQ2d 1225 (Fed. Cir. 2006).

<sup>2</sup> *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1565, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991) (“drawings alone may provide a ‘written description’ of an invention as required by Section 112”).

<sup>3</sup> *Behr v. Talbott*, [No West Cite] 27 USPQ2d 1401 (BPAI 1992) (“The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed, including the original drawings, would reasonably have conveyed to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language.”).



processed bonded fibrous mat . . . is **patentably identical** to a multi-layer article constructed by overlaying multiple layers of identical fibrous material” (Office Action of April 21, 2008, p. 3, last paragraph; emphasis added). Aside from disregarding the requirement in claim 25 for “discrete” layers and applying a “patentably identical” standard that does not appear to have any recognized meaning in the law, the Examiner’s statement does not establish that either cited reference discloses the exact same invention being claimed (or even a single mass of wet processed bonded fibrous mat, for that matter).

Even if Oleszczuk or Lickfield disclose a single layer including bicomponent fibers, the bicomponent fibers do not bond the fibers within individual layers of the mat, and the Examiner does not contend otherwise. Any assertion that it is “possible” that such occurs in the products of these references is mere speculation, and cannot support a finding of anticipation. *Scaltech, Inc. v. Retec/Tetra, LLC*, 178 F.3d 1378, 1384, 51 USPQ2d 1055, 1059 (Fed. Cir. 1999) (holding that inherency is not established by “probabilities or possibilities”). In light of the foregoing, reversal of the anticipation rejections of claim 25 based on Oleszczuk or Lickfield is in order.

**D. CLAIMS 1-5, 11, 12, 25 AND 26 ARE NOT ANTICIPATED BY WELCHEL**

The rejections of claims 1-5, 11, 12, and 25 as anticipated by Welchel are also made in error. The Examiner readily admits that Welchel’s teaching is limited to air-laid mats, but nonetheless contends that the mat of Welchel “is **identical to or only slightly different from** the claimed article (wet-laid)” (emphasis added). In response to Appellant’s challenge to this assertion as being unsupported by any evidence in the record, the Examiner states that such is “common sense,” and cites definitions of the terms “air-laid” and “wet-laid” in support.

“A finding of anticipation requires that all aspects of the claimed invention were already described in a single reference: a finding that is **not supportable if it is necessary to prove facts beyond those disclosed in the reference in order to meet the claim limitations.**” *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576-1577, 18 USPQ2d 1001 (Fed. Cir. 1991) (emphasis added). “The role of extrinsic evidence is to educate the decision-maker to what the reference meant to persons of ordinary skill in the field of the invention, not to fill gaps in the reference. *Id.* (citing *Studiengesellschaft Kohle, mb H v. Dart Industries, Inc.*, 726 F.2d 724, 727, 220 USPQ 841, 842 (Fed. Cir. 1984) (although additional references may serve to reveal what a reference would have meant to a person of ordinary skill, it is error to build “anticipation” on a combination of these references)). An anticipation rejection cannot be

sustained “[i]f it is necessary to reach beyond the boundaries of a single reference to provide missing disclosure of the claimed invention . . . .” *Id.*

The cited definitions do not prove that Welchel contains an enabled disclosure, or show that a characteristic not disclosed in that reference is inherent. Nor are they used to explain the meaning of a term used in Welchel. Instead, this extraneous information is solely used in an effort to “fill the gap” missing from Welchel that its disclosed structure is allegedly “identical to or only slightly different from the claimed article (wet-laid).” Accordingly, reliance on these definitions (or “common sense”) as a “secondary reference” in support of an anticipation rejection is improper under well-established authority of the Court of Appeals for the Federal Circuit.

Regardless, the cited definitions do not support the proposition advanced, but instead favor the Applicant’s interpretation. Nowhere do these definitions establish that an air laid mat is **identical** to or “only slightly different from” a wet processed mat. Rather, the definitions provided support Applicant’s contention that a noteworthy difference in the product formed indeed exists (namely, wet processing “provides an insulating layer with a more consistent weight per unit area” and also “provides more intimate mixing of the fiber blends and more random fiber orientation . . . .”; see Applicant’s specification, p. 7, second full paragraph). The definitions do not in any way compare the resulting mats, or provide any insight into their relative properties. Hence, this submission does not and cannot qualify as the requisite “substantial evidence” to support the Examiner’s finding that Welchel discloses the “exact same invention” being claimed.

The Examiner’s position also completely ignores the advantages of using wet processed layers of mat, as discussed in the Applicant’s specification. Specifically, the inventors upon being sworn aver in the specification that:

The wet process is preferred over various dry laid processes because the wet process provides an insulating layer with a more consistent weight per unit area. The wet process also provides more intimate mixing of the fiber blends and more random fiber orientation. Compared with dry-laid processes, the wet process is capable of high production rate, thus providing a less costly insulating layer.

Since the specification filed under oath explains the advantages of using a wet processed mat, it is thus simply not true, as was contended by the Examiner during prosecution, “that applicant has not shown, or attempted to show, that all wet processing steps result in a mat that is patentably

distinct from a mat that is not wet processed.” Quite the contrary, it is the Examiner who, despite having the burden of proof, fails to provide any substantial evidence establishing that the layers shown in Welchel are patentably indistinct from the claimed wet processed mat layers.

In the final Action, the Examiner maintains the position that “the patentability of a product does not depend on its method of production.” Appellant again emphasizes that a “wet processed mat” refers to a product *per se*, and does not recite any method or process steps. *See 3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371-74 69 USPQ2d 1050 (Fed. Cir. 2003) (holding that “multiple embossed patterns” did not import a process limitation into a structural claim); *Hazani v. U.S. International Trade Commission*, 126 F.3d 1473, 44 USPQ2d 1358 (Fed. Cir. 1997) (holding that the limitation “chemically engraved” in a claim “describes the product more by its structure than by the process used to obtain it.”); *In re Garnero*, 412 F.2d 276, 278-79, 162 USPQ 221, 223 (CCPA 1969) (“ . . . the recitation of the particles as ‘interbonded one to another by interfusion between the surfaces of the perlite particles’ is as capable of being construed as a structural limitation as ‘intermixed,’ ‘ground in place,’ ‘press fitted,’ ‘etched,’ and ‘welded,’ all of which at one time or another have been separately held capable of construction as structural, rather than process, limitations”).

Disregarding these precedential decisions, the Examiner cites *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983), attempting to shift the burden of proving patentability to Appellant because the present claims are allegedly “product-by-process” claims. However, this holding is inapposite to the present situation, and does not in any way justify the Examiner’s position.

Specifically, in *Marosi*, the product claims at issue were “directed to a zeolite manufactured by the claimed process,” but which zeolite was otherwise identical to that known in the art. *Id.* at 291. In upholding the rejection of the product claims, the Court held that “[w]here a product-by-process claim is rejected over a prior art product that appears to be identical, although produced by a different process, the burden is upon the applicants to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product.” *Id.* at 293.

In stark contrast to the facts in *Marosi*, the present claims recite a liner/insulator having multiple layers of wet processed mat directly bonded together. Thus, unlike in *Marosi*, the product claimed is not “identical” to anything known in the art. Thus, the claims at issue are not

“product-by-process” claims at all, but rather recite products in structural terms (claims 1-12 and 24-25) or methods of manufacture (claims 13-23). *Hazani v. U.S. International Trade Commission, supra*, is thus directly on point and supports the patentability of the instant claims.

**i. CLAIM 26 IS NOT ANTICIPATED BY WELCHEL**

With respect to claim 26 specifically, it reads on a liner/insulator comprising first and second **individual layers** of wet processed mats comprising thermoplastic polymer staple fibers and thermoplastic bicomponent fibers of different fiber formulations. A first face of the first layer contacts a second face of the second layer.

The Examiner finally rejects this claim as “anticipated” by Welchel, but as noted above this reference does not disclose the claimed layers with contacting faces. Even if accepted as true, the Examiner’s contention that an air laid mat is “only slightly different” from the claimed wet processed mat must lead to the conclusion the anticipation rejection is improper, because it confirms that Welchel does not *per se* disclose the **exact same invention being claimed**. Rather, it is, at best, “only slightly different,” and thus does not meet the strict identity requirement of a proper anticipation rejection.

**E. CLAIMS 1-5, 9-15, 19-22 AND 24-27 ARE UNOBVIOUS OVER OLESZCZUK OR LICKFIELD AND WELCHEL**

Appellant also respectfully requests review of the final rejections of claims 1-5, 9-15, 19-22, and 24-27 based on the combination of Oleszczuk and Lickfield as primary references, in further view of Welchel. The Examiner previously admitted that “layers (14) and (16) [Oleszczuk et al. and Lickfield et al.] are not directly bonded,” but nonetheless concludes that one of these layers “would be directly bonded to another layer of wet processed mat.” This is because, according to the Examiner, “Oleszczuk et al. and Lickfield et al. each disclose that additional ‘supporting’ (wet processed bicomponent staple fiber mat) layers may be added to the article . . . .” (Office Action dated 11/8/07, p. 17, last sentence).

Again, Appellant emphasizes that absolutely no evidence in the record supports this conclusion, and the Examiner points to nothing in the final Office Action to support the contention made. Oleszczuk and Lickfield do **not** in any of the passages cited disclose that an additional “wet processed mat” layer may be added to the article, let alone **directly bonded to another wet processed mat layer** as required by the claims at issue. While these references include an omnibus statement regarding the possible addition of unspecified layers in an

unspecified manner, this hardly qualifies as the requisite substantial evidence necessary to support a proper obviousness rejection. *See In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001) (recognizing the need for “some concrete evidence in the record in support of” findings of obviousness). Stated another way, no “reasonable mind might accept as adequate” that the teachings of Oleszczuk and Lickfield as to the addition of various additional layers would make it obvious to directly bond a wet processed mat of a different fiber formulation to either of the layers 14, 16 disclosed in these references, when the references themselves do not even mention the basic structure being claimed.

Likewise, the requisite substantial evidence does not support the ultimate conclusion reached as to the obviousness of the inventions of these claims. The Examiner concludes based on the teachings of the cited references that a skilled artisan would have found it obvious to “directly bond an additional wet processed bicomponent staple fiber mat supporting layer, with a different fiber formulation . . . because the additional wet processed bicomponent staple fiber mat supporting layer would allow the surface to be more aesthetically pleasing to the touch and more comfortable to the user” (Office Action of 11/8/07, p. 18). The difficulty with this position is that no evidence in the record supports the conclusion that adding a wet processed mat layer having a different fiber formulation would produce the stated result. As implicitly admitted by the Examiner, Welchel does not mention any wet processed mat layer directly bonded to another wet processed mat layer of the type claimed having a different fiber formulation, so it cannot support the conclusion reached. Moreover, the Examiner expressly admits that Oleszczuk and Lickfield “do not appear to specifically mention at least one adjacent additional layer of different fiber formulation” (*Id.* at p. 5). The Examiner’s conclusion is thus a *non sequitur*, since the fact that Welchel teaches that a different fiber diameter or denier may create a surface more “aesthetically more pleasing to the touch” would not in any way provide a reason for a skilled artisan to directly bond two wet processed mats having different fiber formulations together as required by the claim.

**i. CLAIM 13 IS UNOBVIOUS OVER OLESZCZUK OR LICKFIELD AND WELCHEL**

Turning to method claim 13 alone, it specifically requires the step of “applying sufficient heat and pressure to said first and second layers of mat to bond said first layer and said second layer directly together and form said liner/insulator.” As admitted by the Examiner, the primary references cited do not in any way teach directly bonding layers of wet processed mat, as

claimed. Hence, they cannot possibly teach the step of “applying heat and pressure” to two such layers in order to bond them.

In response, the Examiner disagrees, stating that “Oleszczuk and Lickfield each disclosed that the layers may be thermally bonded.” Respectfully, these references fail to mention a liner/insulator including first and second layers of wet processed mat directly bonded together, wherein the first and second layers have different fiber formulations. Accordingly, even if the teachings of these references are combined with Welchel, which the Examiner admits fails to disclose the claimed wet processed mat with layers having different fiber formulations, they would in no way disclose all limitations of process claim 13, as required for a *prima facie* case of obviousness.

**ii. CLAIM 24 IS UNOBVIOUS**  
**OVER OLESZCZUK OR LICKFIELD AND WELCHEL**

As for dependent claim 24, the Examiner contends that its terms are met by the three references cited against claim 1, asserting that the “ordinary meaning” of the word “composition” is “general makeup.” As with the Examiner’s proffered definition of “discrete,” no evidence cited establishes that the definition of “general makeup” is consistent with the meaning of “composition” that would be understood by a skilled artisan upon reviewing Applicant’s specification. *See In re Cortright, supra*. Rather, as demonstrated by **evidence** cited by the Appellant and the present specification, “composition” would be understood to mean that the fibers have not merely a different size, but rather comprise different elements or compounds. Again, “[i]ndiscriminate reliance should not be placed on layman’s definitions found in dictionaries,”<sup>4</sup> especially when that term used is one having a technical meaning readily understood by a skilled artisan. Based on the proper construction of the terms used in the claims, reversal of the rejection is in order.

**iii. CLAIM 26 IS UNOBVIOUS**  
**OVER OLESZCZUK OR LICKFIELD AND WELCHEL**

With respect to claim 26, it reads on a liner/insulator comprising first and second **individual layers** of wet processed mats comprising thermoplastic polymer staple fibers and

---

<sup>4</sup> *Ex parte Kumagai, supra*.

thermoplastic bicomponent fibers of different fiber formulations. A first face of the first layer contacts a second face of the second layer.

The Examiner finally rejects this claim as obvious in view of Oleszczuk, Lickfield, and Welchel, but as noted above, none of these references discloses the claimed layers with contacting faces. Given that the Examiner does not in any way explain the manner in which the limitations of this claim are met by the cited references, the rejection cannot stand.

**iv. CLAIM 27 IS UNOBVIOUS**  
**OVER OLESZCZUK OR LICKFIELD AND WELCHEL**

In rejecting method claim 27 as “obvious,” the Examiner merely states that:

Oleszczuk and Lickfield each disclose that the layers may be thermally bonded . . . . It is noted that Welchel also discloses that the thermoplastic bicomponent staple fiber nonwoven layers (105 and 102) are to be directly bonded (45-48).

Respectfully, the Examiner nowhere establishes any disclosure in these references of the steps of: (1) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a first layer of wet processed mat having a first face; (2) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a second layer of wet processed mat having a different fiber formulation than said first layer, said second layer having a second face; and (3) applying sufficient heat and pressure to the first and second layers of mat to bond said first layer and said second layer directly together and form the liner/insulator. “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Since such articulated reasoning is plainly lacking, a *prima facie* case of obviousness is lacking and reversal of the rejections is therefore in order.

**F. CLAIMS 1-5, 11-15, AND 21-22 ARE UNOBVIOUS OVER WELCHEL**  
**IN VIEW OF HOLM, CEDERBLAD, OR D’ACCHIOLI**

Claims 1-5, 11-15, 21-22, and 25-27 are further rejected as obvious in light of Welchel “in view of anyone of” Holm, Cederblad, or D’Acchioli. While it is admitted that the primary Welchel reference does not disclose the claimed wet processed layers of mat directly bonded together (see Office Action, April 21, 2008, p. 11, lines 10, “Welchel does not appear to specifically mention a wet-laid process”), the secondary references purportedly disclose “that it

is known in the art to form mats by a wet-laid or dry-laid process.” Based on this teaching, the Examiner posits that it would have been obvious to make the claimed mats “from any suitable nonwoven material, such as dry laid or wet laid, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics” (*Id.* at p. 11).

First of all, that a modification might be “within the capabilities” of a skilled artisan, or a skilled artisan “would be able” to make the invention, is clearly insufficient to establish a *prima facie* case of obviousness. See MPEP § 2143.01 (the “mere statement that the claimed invention is within the capabilities of one of ordinary skill in the art **is not sufficient . . . to establish prima facie obviousness**”) (emphasis added). Disregarding this clear statement from the MPEP, the Examiner cites to several dated decisions allegedly supporting the contention that “[t]he substitution of known equivalent structures involves only ordinary skill in the art.” However, a careful review reveals that none of these decisions controls the present situation.

The first decision, *In re Fout*, 675 F.2d 297, 301 (CCPA 1982), held that an “[e]xpress suggestion to substitute one equivalent for another need not be present to render such substitution obvious.” Hence, it does not appear to stand for the broad proposition of law being advanced by the Examiner. The same is true of the second decision cited, which merely provides that: “[t]he issue of obviousness is not determined by what the references expressly state but by what they would reasonably suggest to one of ordinary skill in the art.” *In re Siebentritt*, 372 F.2d 566, 152 USPQ 618, 54 CCPA 1083, 1085 (CCPA 1967).

The final decision, *In re Ruff*, 256 F.2d 590, 118 USPQ 343 (CCPA 1958) also does not support the rejection. First of all, it was decided long before the landmark decision of the U.S. Supreme Court in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 86 S. Ct. 684; 15 L. Ed. 2d 545, 148 U.S.P.Q. (BNA) 459 (U.S. 1966), the viability of which was recently affirmed in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ 1385 (U.S. 2007). “Office policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103.” MPEP § 2141. Accordingly, reliance on *In re Ruff* is not in accordance with Office policy.

Regardless, *Ruff* actually stands for the proposition that “. . . actual equivalence is **not enough** to justify refusal of a patent on one member of a group when another member is in the prior art.” *In re Ruff*, *supra*, 45 CCPA at 1051 (emphasis added). This is precisely the position



the Examiner is taking here in alleging that “air-laid” and “wet-laid” mats are equivalent and therefore the claimed invention is obvious.

Even if the dated holdings relied upon control on the present facts, nothing in the record (including the definitions cited by the Examiner) establishes that air laid and wet processed mats are “known equivalent structures.” Aside from the remarkable lack of any evidence supporting the Examiner’s position, Appellant specifically claims multiple layers of wet processed mat directly bonded together, and the primary reference relied upon (Welchel) teaches an air-laid mat. Holm, Cederblad, or D’Acchioli do not even remotely disclose or teach multiple layers of wet processed mat directly bonded together made of the claimed thermoplastic polymer staple fibers and thermoplastic bicomponent fibers, or that such fibers when wet processed would be suitable for forming a multi-layered insulator. Indeed, an expressly stated goal of the Holm patent is to produce an article of natural fibers (see col. 1, lines 66-67), so it actually teaches away from the arrangement of Welchel. For these reasons, the Examiner has failed to establish the “known equivalence” of wet processed and air laid mats, as well as to set forth a *prima facie* case that it would be obvious to arrive at the claimed inventions based on the cited combination of references.

The arguments that Holm “teaches away” from the claimed invention are challenged because “the rejection does not suggest using the fiber material disclosed by Holm” (Office Action of April 21, 2008, p. 26, first paragraph). Regardless, a reference must be considered “as a whole,” including any portion that would lead a skilled artisan away from the claimed invention. MPEP § 2141.02 (prior art must be considered in its entirety, including disclosures that teach away from the claims). In making the rejection, the Examiner cannot simply disregard that Holm disparages the use of thermoplastic fibers, and would therefore lead a skilled artisan in a direction away from the Applicant’s invention. *See, e.g. In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130 (Fed. Cir. 1994) (“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be . . . led in a direction divergent from the path that was taken by the applicant.”).

A secondary reason that a *prima facie* case of obviousness is lacking is the complete and total failure of the Examiner to identify any evidence of a reason for using the product of Holm, Cederblad, or D’Acchioli in the arrangement of Welchel. Evidentiary support for a reason for the combination is undoubtedly still a requirement of a *prima facie* case of obviousness. *See*

Memorandum of Margaret A. Focarino, Deputy Commissioner for Patent Operations, May 3, 2007 (“in formulating a rejection under 35 U.S.C. 103(a) based upon a combination of prior art elements, **it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed** . . .”) (emphasis added). The mere incantation of a passage from “*KSR v. Teleflex*” by the Examiner cannot sustain the rejection, where a reason for combining the teachings of the references is lacking (and in fact is contraindicated). Indeed, the Supreme Court’s decision in *KSR* actually supports the Appellant’s position, since it recognizes that the present Examiner’s effort to “merely demonstrat[e] that each of its elements was, independently, known in the prior art” is insufficient to establish obviousness. See *KSR Int’l Co. v. Teleflex, Inc.*, *supra* at 1741 (holding that in formulating a rejection under 35 U.S.C. 103(a), it was “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” and further stating that “**a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art** . . . .”) (emphasis added).

i. **CLAIM 25 IS UNOBVIOUS OVER WELCHEL  
IN VIEW OF HOLM, CEDERBLAD, OR D’ACCHIOLI**

As for claim 25, Appellant stated in the prior response that Welchel does not disclose any third layer of bicomponent fibers, period, and indeed specifically teaches that one of the layers must consist solely of cellulosic fibers in order to be absorbent (see col. 4, lines 36-39). The Examiner disagrees, citing to two passages and Figure 2 of Welchel. The first cited passage at col. 5, lines 35-65, states in its entirety as follows:

Another embodiment of the composite is shown in FIG. 2 of the drawings. In this configuration, the composite 100 is formed from three layers of material including the same top sheet 102 and a bottom sheet 104 as in FIG. 1 and a second top sheet 105 disposed on a side 107 of the top sheet 102 which is opposed to the bottom sheet 104. As with the previous embodiment, the top sheet 102 is formed from a layer of matrix fibers, **the bottom sheet 104 is formed from a layer of absorbent fibers** and the second top sheet 105 is formed from a fibrous nonwoven web which may include matrix fibers. **An advantageous embodiment is where the top sheet 102 and the second top sheet 105 contain bicomponent matrix fibers so that they can be subjected to a heating process to bond the two sheets together.** The fibers of the top sheet 102 and the bottom sheet 104 are entangled together in the same manner as described above. As with the embodiment shown in FIG. 1 and described above, due to the entangling of the

fibers from the bottom sheet 104 into the top sheet 102, region 106 will contain essentially matrix fibers. Region 108 will be a mixture of absorbent fibers and nonwoven matrix fibers and region 110 will contain essentially absorbent fibers. In addition, there will be yet a third region 114 formed by the second top sheet 105 which will also contain essentially matrix fibers. These matrix fibers may be the same as or different than the matrix fibers in region 106 or they may be a blend of matrix fibers.

(emphasis added). Nowhere does this passage describe any third layer of bicomponent fibers, nor does it even state that the top sheets 102, 105 comprise **both** thermoplastic polymer staple fibers and thermoplastic bicomponent fibers. The same is true of the passage at column 7, lines 4-21 (which actually prefaces a statement that teaches away from wet processing using bicomponent fibers at col. 7, lines 36-40: “The **best method** . . . when using bicomponent staple fibers is to use a **through-air bonder** such as is described above with respect to the bicomponent spunbond web formation process.”) (emphasis added). Figure 2 does nothing to supplement this teaching in the Examiner’s favor, either. Accordingly, the evidence relied upon does not support the rejections made, and reversal is therefore in order.

ii. **CLAIM 26 IS UNOBVIOUS OVER WELCHEL IN VIEW OF HOLM, CEDERBLAD, OR D’ACCHIOLI**

With respect to claim 26, it reads on a liner/insulator comprising first and second **individual layers** of wet processed mats comprising thermoplastic polymer staple fibers and thermoplastic bicomponent fibers of different fiber formulations. A first face of the first layer contacts a second face of the second layer. T

The Examiner finally rejects this claim as obvious in view of Welchel, in further view of Holm, Cederblad, or D’Acchioli. However, as noted above, none of these references discloses the claimed layers. Given that the Examiner does not in any way explain the manner in which the limitations of this claim are met by the cited references in making the rejection, it cannot stand.

iii. **CLAIM 27 IS UNOBVIOUS OVER WELCHEL IN VIEW OF HOLM, CEDERBLAD, OR D’ACCHIOLI**

In rejecting method claim 27 as “obvious,” the Examiner merely states that “Welchel discloses that the layers may be thermally bonded by heat and pressure” (Office Action of April 21, 2008, p. 12, lines 4-5). Respectfully, the Examiner nowhere establishes any disclosure in

Welchel or the other cited references of the steps of: (1) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a first layer of wet processed mat having a first face; and (2) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a second layer of wet processed mat having a different fiber formulation than said first layer, said second layer having a second face. “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Furthermore, the reasoning should be made explicit. *See KSR, supra*. Since such explicit, articulated reasoning is plainly lacking, a *prima facie* case of obviousness is lacking and reversal of the rejections is therefore in order.

#### **VIII. CONCLUSION**

In summary, Appellant has addressed and met every rejection set forth in the last Office Action and asseverates that all of the rejected claims meet the statutory requirements for patentability. Thus, it is respectfully requested that all outstanding rejections of all claims be reversed and that the present application be remanded to the Examiner with instructions for immediate allowance

Respectfully submitted,

OWENS CORNING

By: /joan drew/  
Joan N. Drew  
Reg. No. 52,364

Owens Corning  
2790 Columbus Road, Route 16  
Granville, Ohio 43023-1200  
(740) 321-5359

## **IX. CLAIMS APPENDIX**

The claims on appeal read as follows:

1. (previously presented) A liner/insulator comprising:
  - a) a first layer of wet processed mat;
  - b) a second layer of wet processed mat directly bonded to said first layer;wherein said first and second layers comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers of different fiber formulations.
2. (original) The liner/insulator of claim 1, further comprising a third layer of wet processed mat comprising thermoplastic polymer staple fibers and thermoplastic bicomponent fibers.
3. (original) The liner/insulator of claim 2, wherein said thermoplastic staple fibers and said thermoplastic bicomponent fibers are selected from a group of materials consisting of polyester, polyethylene, polypropylene, polyethylene terephthalate and any mixtures and/or copolymers thereof.
4. (original) The liner insulator of claim 2, wherein said first, second and third layers are bonded together.
5. (original) The liner/insulator of claim 4, wherein said layers are bonded together by heat and pressure.
6. (original) The liner/insulator of claim 1, wherein said first and said second layers are between about 0.05 to about 0.30 inches thick.
7. (original) The liner/insulator of claim 2, wherein said third layer is between about 0.05 to about 0.30 inches thick.
8. (original) The liner/insulator of claim 7, wherein said liner/insulator is between about 0.125 to about 1.5 inches thick.

9. (previously presented) The liner/insulator of claim 1, wherein said first layer is hydrophilic.
10. (previously presented) The liner/insulator of claim 1, wherein said first layer has a high heat resistance.
11. (previously presented) The liner/insulator of claim 1, wherein said second layer is hydrophobic.
12. (original) The liner/insulator of claim 2, wherein said third layer is sound absorbent.
13. (previously presented) A method of producing a wet processed liner/insulator comprising the steps of:
  - a) providing a first layer of wet processed mat;
  - b) providing a second layer of wet processed mat having a different fiber formulation than said first layer;  
wherein said first and second layers comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers;
  - c) applying sufficient heat and pressure to said first and second layers of mat to bond said first layer and said second layer directly together and form said liner/insulator.
14. (original) The method of claim 13, further comprising the step of providing a third layer of wet processed mat comprising thermoplastic polymer staple fibers and thermoplastic bicomponent fibers.
15. (original) The method of claim 14, wherein said thermoplastic staple fibers and said thermoplastic bicomponent fibers are selected from a group of materials consisting of polyester, polyethylene, polypropylene, polyethylene terephthalate and any mixtures and/or copolymers thereof.
16. (original) The method of claim 13, wherein said first and said second layers are between about 0.05 to about 0.30 inches thick.

17. (original) The method of claim 14, wherein said third layer is between about 0.05 to about 0.30 inches thick.
18. (original) The method of claim 13, wherein said liner/insulator is between about 0.125 to about 1.5 inches thick.
19. (previously presented) The method of claim 13, wherein said first layer is hydrophilic.
20. (previously presented) The method of claim 13, wherein said first layer has a high heat resistance.
21. (previously presented) The method of claim 13, wherein said second layer is hydrophobic.
22. (original) The method of claim 14, wherein said third layer is sound absorbent.
23. (original) The method of claim 13, wherein heat is applied to said first and said second layers at a temperature of about 250 degrees F to about 400 degrees F.
24. (previously presented) The liner/insulator of claim 1, wherein the first layer has a first fiber composition and the second layer has a second fiber composition, wherein the first fiber composition is different from the second fiber composition.
25. (previously presented) A liner/insulator comprising:
  - a) a first layer of wet processed mat;
  - b) a second, discrete layer of wet processed mat directly bonded to said first layer;
  - c) a third, discrete layer of wet processed mat directly bonded to said second layer;wherein said first, second, and third layers comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers, which bicomponent fibers bond the fibers together within each individual layer of the mat.

26. (previously presented) A liner/insulator comprising:
- a) a first individual layer of wet processed mat having a first face;
  - b) a second individual layer of wet processed mat having a second face contacting said first face of said first layer;
- wherein said first and second individual layers comprise thermoplastic polymer staple fibers and thermoplastic bicomponent fibers of different fiber formulations.
27. (previously presented) A method of producing a wet processed liner/insulator comprising the steps of:
- a) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a first layer of wet processed mat having a first face;
  - b) wet processing thermoplastic polymer staple fibers and thermoplastic bicomponent fibers to form a second layer of wet processed mat having a different fiber formulation than said first layer, said second layer having a second face; and
  - c) applying sufficient heat and pressure to said first and second layers of mat to bond said first layer and said second layer directly together and form said liner/insulator.



## **X. EVIDENCE APPENDIX**

“Discrete”; *McGraw-Hill Dictionary of Scientific and Technical Terms* (6<sup>th</sup> ed. 2003), entered on 6/19/2008:

**discrete** [SCI TECH] 1. Composed of separate and distinct parts. 2. Having an individually distinct identity. { di'skrēt }

“Composition”; *McGraw-Hill Dictionary of Scientific and Technical Terms* (6<sup>th</sup> ed. 2003), entered on 11/29/2006:

**composition** [CHEM] The elements or compounds making up a material or produced from it by analysis. [GRAPHICS] The act of composing or combining type for printing, either by hand or by machine. [MATH] 1. The composition of two mappings,  $f$  and  $g$ , denoted  $g \circ f$ , where the domain of  $g$  includes the range of  $f$ , is the mapping which assigns to each element  $x$  in the domain of  $f$  the element  $g(y)$ , where  $y = f(x)$ . 2. See addition. [MECH] The determination of a force whose effect is the same as that of two or more given forces acting simultaneously; all forces are considered acting at the same point. { kām-pə'zish-ən }

## **XI. RELATED PROCEEDINGS APPENDIX**

None